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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/662,492

09/15/2003

Albert E. Ortega

CRX-106XC1

9209

23557 7590 03/17/2010
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EXAMINER

BUTLER, PATRICK NEAL

ART UNIT

PAPER NUMBER

1791

NOTIFICATION DATE

DELIVERY MODE

03/17/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

euspto@slspatents.com

Office Action Summary	Application No. 10/662,492	Applicant(s) ORTEGA, ALBERT E.	
	Examiner Patrick Butler	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-23 and 25-32 is/are pending in the application.
- 4a) Of the above claim(s) 6-9, 21-23 and 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10, 11, 13-20, 25, 26 and 28-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 13-15, 17-20, 25, 26, and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie (U.S. Patent No. 5,783,503) in view of Tortora (*Understanding Textiles*, pages 38, 39, 153-157, 330, 401, and 402).

With respect to Claims 1 and 29, Gillespie teaches producing a spunbond product (spunbond nonwoven fabric; bonding the filaments of the web) by originating filaments from a spinneret (extruding), attenuating and drawing the filaments through a slot draw apparatus, and depositing the filaments onto a collection surface to form a web (see Fig. 4; col. 3, lines 16-34 and col. 9, lines 18-26). Gillespie teaches using combinations including nylon and polyester (see Gillespie, col. 4, lines 66 - col. 5, line 25). Increases in moisture absorbency increase fiber conductivity, which is antistatic since it limits static buildup, and nylon's or polyester's presence would improve the absorbency of the blend since they have 0.4-4.5% standard moisture regain (see Tortora, *Understanding Textiles*, pages 38 and 39, Table 2.1, and page 401, second paragraph). Thus, nylon's or polyester's additional presence acts as antistatic agents to the polyester or olefins in the blends. Gillespie teaches that the filaments are bonded by calendaring and hot through-air methods (see col. 7, lines 29-37), which would either

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heat the filaments to the point of melting or collect the filaments at the point of melting, respectively. Moreover, spunbonding is necessarily done by bonding the filaments while they partially molten (see Tortora, *Understanding Textiles*, page 330, first paragraph), and Gillespie's nylon 6 and polypropylene (see col. 8, lines 45-53) are molten above 212 and 163 °C (see Tortora, *Understanding Textiles*, page 38 and 39, Table 2.1).

If not otherwise expressed by Gillespie in view of Tortora to bond the fibers thermally within the claimed range (e.g., between 180 and about 250 °C), in this regard, Gillespie teaches that the filaments are bonded by calendaring and hot through-air methods (see col. 7, lines 29-37), which would either heat the filaments to the point of melting or collect the filaments at the point of melting, respectively, and Tortora teaches spunbonding done by bonding the filaments while they partially molten (see Tortora, *Understanding Textiles*, page 330, first paragraph). As such, Gillespie in view of Tortora recognizes that the bonding temperature is a result-effective variable. Since bonding temperature is a result-effective variable, one of ordinary skill in the art would have obviously been motivated to determine the optimum bonding temperature applied in the process of Gillespie in view of Tortora through routine experimentation based upon allowing the nylon 6 to be sufficiently heated to bond, which would be at least its molten temperature of 212 °C.

If Gillespie's nylon and polyester do not meet the claimed limitation of "antistatic agent" (see col. 4, lines 66 - col. 5, line 25), then Gillespie does teach to incorporate into

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the polymer melt components to control electrical properties (forming in an extruder) (see col. 5, lines 35-42).

Tortora teaches that bicomponent fibers contain metal or carbon, which are antistatic agents (see page 401, forth paragraph, through page 402, line 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Tortora's antistatic metal or carbon in the composition of fibers taught by Gillespie in order to produce fibers that decrease static buildup (see Tortora, page 401, paragraphs 2-4) and in order to control electrical properties (see Gillespie col. 5, lines 35-42).

Gillespie in view of Tortora would necessarily teach the claimed result of having a static level measured at about one half inch below the outlet of the slot attenuation device of -2 to 2 kilovolt per inch as claimed principally because Gillespie teaches each of the claimed process steps.

With respect to Claims 2 and 4, Gillespie teaches using nylon, polyester, PE, PP, and PBT and combinations, which read on the claims (see Gillespie, col. 4, lines 66-col. 5, line 25).

With respect to Claim 3, Gillespie teaches using "nylon ... and copolymers thereof" (see col. 5, lines 5-8), which reads on the claim language "nylon copolymers," which meets the limitations of the claim.

Moreover, with respect to Claim 3, Tortora teaches that nylon 6 has a higher tenacity than nylon 6,6 (see page 156, *Strength* section). It would have been obvious to

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one of ordinary skill in the art at the time the invention was made to select nylon 6 as the nylon to use in Gillespie in order to have greater tenacity.

With respect to Claim 5, Gillespie teaches using a slot draw apparatus (see col. 9, lines 18-25).

With respect to Claims 13 and 32, Gillespie would necessarily teach the claimed result of having a static level measured at about one half inch below the outlet of the slot attenuation device of -1 to 1 kilovolt per inch as claimed principally because Gillespie teaches each of the claimed process steps positively recited.

With respect to Claims 14, 15, 30, and 31, nylon is one of the components in the bicomponent filament (see col. 4, lines 66 through col. 5, line 17). In a side-by-side configuration (see Fig. 3; see col. 5, line 66 through col. 6, line 4), the bicomponent filament would necessarily have at least one of the two components with more than 5% of the surface area. Moreover, if both components were nylon as taught by Gillespie (see col. 5, lines 33-42), nylon would occupy 100% of the surface area of each filament, which includes the claimed range of at least about 5%.

With respect to Claim 17, Gillespie teaches producing a spunbond product (spunbond nonwoven fabric; bonding the filaments of the web) by originating filaments from a spinneret using blends in separate extruders to form filament with one of the blends forming a portion of the surface of the filaments, attenuating and drawing the filaments through a slot draw apparatus, and depositing the filaments onto a collection surface to form a web (see Fig. 3 and 4; col. 3, lines 16-34; col. 5, line 66 through col. 6, line 9; col. 8, lines 8-19; and col. 9, lines 18-26).

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With respect to Claim 18, Gillespie teaches using nylon, polyester, PE, PP, and PBT and combinations, which read on the claims (see Gillespie, col. 4, lines 66-col. 5, line 25).

With respect to Claim 19, Gillespie teaches using “nylon ... and copolymers thereof” (see col. 5, lines 5-8, which reads on the claim language “nylon copolymers,” which meets the limitations of the claim.

Moreover, with respect to Claim 19, Tortora teaches that nylon 6 has a higher tenacity than nylon 6,6 (see page 156, *Strength* section). It would have been obvious to one of ordinary skill in the art at the time the invention was made to select nylon 6 as the nylon to use in Gillespie in order to have greater tenacity.

With respect to Claim 20, Gillespie teaches using a slot draw apparatus (see col. 9, lines 18-25).

With respect to Claim 25, Gillespie would necessarily teach the claimed result of having a static level measured at about one half inch below the outlet of the slot attenuation device of -1 to 1 kilovolt per inch as claimed principally because Gillespie teaches each of the claimed process steps positively recited.

With respect to Claim 26, Gillespie teaches that at least about 5 percent of the surface area of each filament is made of a nylon polymer (see Fig. 3; see col. 5, line 66 through col. 6, line 4). Nylon is one of the components in the bicomponent filament (see col. 4, lines 66 through col. 5, line 17). In a side-by-side configuration (see Fig. 3; see col. 5, line 66 through col. 6, line 4), the bicomponent filament would necessarily have at least one of the two components with more than 5% of the surface area. Moreover, if

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both components were nylon as taught by Gillespie (see col. 5, lines 33-42), nylon would occupy 100% of the surface area of each filament, which includes the claimed range of at least about 5%.

Claims 1-5, 10, 11, 13-20, 25, 26, and 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie (U.S. Patent No. 5,783,503) in view of Tortora (*Understanding Textiles*, pages 38, 39, 153-157, 330, 401, and 402).and in further view of either Warburton (US Patent No. 4,081,383) or George (US Patent No. 4,167,464).

With respect to Claims 1 and 29, Gillespie teaches producing a spunbond product (spunbond nonwoven fabric; bonding the filaments of the web) by originating filaments from a spinneret (extruding), attenuating and drawing the filaments through a slot draw apparatus, and depositing the filaments onto a collection surface to form a web (see Fig. 4; col. 3, lines 16-34 and col. 9, lines 18-26). Gillespie teaches that the filaments are bonded by calendaring and hot through-air methods (see col. 7, lines 29-37), which would either heat the filaments to the point of melting or collect the filaments at the point of melting, respectively. Moreover, spunbonding is necessarily done by bonding the filaments while they partially molten (see Tortora, *Understanding Textiles*, page 330, first paragraph), and Gillespie's nylon 6 and polypropylene (see col. 8, lines 45-53) are molten above 212 and 163 °C (see Tortora, *Understanding Textiles*, page 38 and 39, Table 2.1).

If not otherwise expressed by Gillespie in view of Tortora to bond the fibers thermally within the claimed range (e.g., between 180 and about 250 °C), in this regard, Gillespie teaches that the filaments are bonded by calendaring and hot through-air

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methods (see col. 7, lines 29-37), which would either heat the filaments to the point of melting or collect the filaments at the point of melting, respectively, and Tortora teaches spunbonding done by bonding the filaments while they partially molten (see Tortora, *Understanding Textiles*, page 330, first paragraph). As such, Gillespie in view of Tortora recognizes that the bonding temperature is a result-effective variable. Since bonding temperature is a result-effective variable, one of ordinary skill in the art would have obviously been motivated to determine the optimum bonding temperature applied in the process of Gillespie in view of Tortora through routine experimentation based upon allowing the nylon 6 to be sufficiently heated to bond, which would be at least its molten temperature of 212 °C.

If Gillespie's nylon (polycaprolactum) and polyester do not meet the claimed limitation of "antistatic agent" (see col. 4, lines 66 - col. 5, line 25), then Gillespie does teach to incorporate into the polymer melt components to control electrical properties (forming in an extruder) (see col. 5, lines 35-42).

Warburton teaches using a copolymer that contains sodium salts (sodium salts) of dodecane-1-sulfonic acid (a C₁₀-C₁₈ alkane and sulfonic acid) (see col. 4, line 60 through col. 5, line 6) and vinyl sulfonic acid (see col. 3, line 8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Warburton's copolymer composition in the extrusion of Gillespie in order to provide the product with better anti-soiling treatment, and to control the anti-soiling treatment's polymer particle size (see Abstract and col. 4, lines 60 and 61).

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Alternative to Warburton, George teaches using a copolymer that contains sodium salts (sodium salts) of dodecane-1-sulfonic acid (a C₁₀-C₁₈ alkane and sulfonic acid) or octadecane-1-sulfonic acid (a C₁₀-C₁₈ alkane and sulfonic acid) (see col. 4, line 65 through col. 5, line 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use George's copolymer composition in the extrusion of Gillespie in order to provide the product with better degree of absorption of water and body fluids (see George, Abstract; col. 1, lines 46-49; and col. 6, lines 42-59).

Since Applicant's claim language (see Claim 16) shows that a blend containing polycaprolactum, sulfonic acid, a C₁₀-C₁₈ alkane, and sodium salts is an antistatic agent, Warburton's and George's teaching of the agent (as cited above) necessarily meets the claimed limitation of "antistatic agent." Moreover, Warburton recognizes the benefit of the polymer in reducing static build-up (see col. 6, lines 34-37).

Applicant's specification indicates that a composition of a polycaprolactum, sulfonic acid, a C₁₀-C₁₈ alkane, and sodium salts added to a two polymer delivery results in 0.6 Kilovolts/inch when added at 1% concentration (see Specification, page 10, table 1).

As Warburton's composition teaches adding the sodium salts (sodium salts) of dodecane-1-sulfonic acid (a C₁₀-C₁₈ alkane and sulfonic acid) is present from 0.5-8% (see col. 5, lines 47-49), the 1% concentration is taught. As George's composition teaches adding the sodium salts (sodium salts) of dodecane-1-sulfonic acid (a C₁₀-C₁₈ alkane and sulfonic acid) is present from 0.01-5% (see col. 5, lines 47-49), the 1%

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concentration is taught. Therefore, Warburton's or George's static would have a static level measured at about one half inch below the outlet of the slot attenuation device of -2 to 2 kilovolt per inch as claimed principally because it teaches the same process and composition as applicant, which arrived at said static level.

With respect to Claims 2 and 4, Gillespie teaches using nylon, polyester, PE, PP, and PBT and combinations, which read on the claims (see Gillespie, col. 4, lines 66-col. 5, line 25).

With respect to Claim 3, Gillespie teaches using "nylon ... and copolymers thereof" (see col. 5, lines 5-8), which reads on the claim language "nylon copolymers," which meets the limitations of the claim.

With respect to Claim 5, Gillespie teaches using a slot draw apparatus (see col. 9, lines 18-25).

With respect to Claims 10, 11, 16, and 28, Claim 16's and Claim 28's antistatic agent of polycaprolactum, sulfonic acid, a C₁₀-C₁₈ alkane, and sodium salts is taught by Gillespie in view of Warburton or George as cited above with respect to Claim 1. Such antistatic agent was indicated to read on Claims 10 and 11 (see Office Action mailed 22 March 2006, page 3, third paragraph and Applicant's Arguments received 22 December 2006, page numbered 9 by Applicant, first paragraph).

With respect to Claims 13, 25, and 32, applicant's specification teaches that a composition of a polycaprolactum, sulfonic acid, a C₁₀-C₁₈ alkane, and sodium salts added to a two polymer delivery results in 0.6 Kilovolts/inch when added at 1% concentration (see Specification, page 10, table 1).

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As Warburton's composition teaches adding the sodium salts (sodium salts) of dodecane-1-sulfonic acid (a C₁₀-C₁₈ alkane and sulfonic acid) is present from 0.5-8% (see col. 5, lines 47-49), the 1% concentration is taught. As George's composition teaches adding the sodium salts (sodium salts) of dodecane-1-sulfonic acid (a C₁₀-C₁₈ alkane and sulfonic acid) is present from 0.01-5% (see col. 5, lines 47-49), the 1% concentration is taught. Therefore, Warburton's or George's static would have a static level measured at about one half inch below the outlet of the slot attenuation device of -2 to 2 and -1 to 1 kilovolt per inch as claimed would measure at less than one kilovolt principally because it teaches the same process and composition as applicant, which arrived at said static level.

With respect to Claims 14 and 15, nylon is one of the components in the bicomponent filament (see col. 4, lines 66 through col. 5, line 17). In a side-by-side configuration (see Fig. 3; see col. 5, line 66 through col. 6, line 4), the bicomponent filament would necessarily have at least one of the two components with more than 5% of the surface area. Moreover, if both components were nylon as taught by Gillespie (see col. 5, lines 33-42), nylon would occupy 100% of the surface area of each filament, which includes the claimed range of at least about 5%.

With respect to Claim 17, Gillespie further teaches producing a spunbond product (spunbond nonwoven fabric; bonding the filaments of the web) by originating filaments from a spinneret using blends in separate extruders to form filament with one of the blends forming a portion of the surface of the filaments, attenuating and drawing the filaments through a slot draw apparatus, and depositing the filaments onto a

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collection surface to form a web (see Fig. 3 and 4; col. 3, lines 16-34; col. 5, line 66 through col. 6, line 9; col. 8, lines 8-19; and col. 9, lines 18-26).

With respect to Claim 18, Gillespie teaches using nylon, polyester, PE, PP, and PBT and combinations, which read on the claims (see Gillespie, col. 4, lines 66-col. 5, line 25).

With respect to Claim 19, Gillespie teaches using “nylon ... and copolymers thereof” (see col. 5, lines 5-8, which reads on the claim language “nylon copolymers,” which meets the limitations of the claim.

With respect to Claim 20, Gillespie teaches using a slot draw apparatus (see col. 9, lines 18-25).

With respect to Claim 26, Gillespie teaches that at least about 5 percent of the surface area of each filament is made of a nylon polymer (see Fig. 3; see col. 5, line 66 through col. 6, line 4). Nylon is one of the components in the bicomponent filament (see col. 4, lines 66 through col. 5, line 17). In a side-by-side configuration (see Fig. 3; see col. 5, line 66 through col. 6, line 4), the bicomponent filament would necessarily have at least one of the two components with more than 5% of the surface area. Moreover, if both components were nylon as taught by Gillespie (see col. 5, lines 33-42), nylon would occupy 100% of the surface area of each filament, which includes the claimed range of at least about 5%.

With respect to Claims 30 and 31, Gillespie teaches that at least about 5 percent of the surface area of each filament is and all filaments are made of a nylon polymer (see Fig. 3; see col. 5, line 66 through col. 6, line 4).

Ortega Declaration

The declaration of Albert E. Ortega under 37 CFR 1.132 filed 6 November 2009 is insufficient to overcome the rejection of claims 1-5, 10, 11, 13-20, 25, 26, and 28-32 based upon the references applied as set forth in the last Office Action.

Indications of the declaration of Albert E. Ortega under 37 CFR 1.132 filed 6 November 2009 appear to be on the grounds that:

A) A prima facie case of unpatentability has not been established because one of ordinary skill in the art at the time the invention was made would not interpret Gillespie's spunbonding process's disclosed extrusion temperature would not necessarily be the bonding temperature. Thus, the claimed bonding temperature is not met.

B) Gillespie does not disclose extruding a blend of nylon and polyolefins at about 250 °C since one of ordinary skill in the art at the time the invention was made would not interpret a spin pack as an extruder.

C) Since nylon and polyester's presence relies on standard moisture regain to control static levels, their presence would not impact the triboelectric charge to result in a static level at the exit of an attenuation device of -2 to 2 kilovolt per inch.

D) Warburton's use of an aqueous dispersion and George's use of material containing water would be recognized as causing problems due to depolymerizing polymers typically used in melt blends. Specifically, there is no motivation to add the material to a melt blend.

The indications of the declaration are addressed as follows:

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A) Spunbonding occurs at a molten temperature of the fibers, which appears to be acknowledged by the declaration of Albert E. Ortega under 37 CFR 1.132 filed 6 November 2009, page 2, section 1. Moreover, as recited above, Gillespie and Tortora teach spunbonding at a molten temperature of the fibers:

Gillespie teaches that the filaments are bonded by calendaring and hot through-air methods (see col. 7, lines 29-37), which would either heat the filaments to the point of melting or collect the filaments at the point of melting, respectively. Moreover, spunbonding is necessarily done by bonding the filaments while they partially molten (see Tortora, *Understanding Textiles*, page 330, first paragraph), and Gillespie's nylon 6 and polypropylene (see col. 8, lines 45-53) are molten above 212 and 163 °C (see Tortora, *Understanding Textiles*, page 38 and 39, Table 2.1).

A) Moreover, as recited above, it would have been obvious to one of ordinary skill in the art at the time the invention was made bond at the claimed temperature range in Gillespie's spunbonding process:

If not otherwise expressed by Gillespie in view of Tortora to bond the fibers thermally within the claimed range (e.g., between 180 and about 250 °C), in this regard, Gillespie teaches that the filaments are bonded by calendaring and hot through-air methods (see col. 7, lines 29-37), which would either heat the filaments to the point of melting or collect the filaments at the point of melting, respectively, and Tortora teaches spunbonding done by bonding the filaments while they partially molten (see Tortora, *Understanding Textiles*, page 330, first

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paragraph). As such, Gillespie in view of Tortora recognizes that the bonding temperature is a result-effective variable. Since bonding temperature is a result-effective variable, one of ordinary skill in the art would have obviously been motivated to determine the optimum bonding temperature applied in the process of Gillespie in view of Tortora through routine experimentation based upon allowing the nylon 6 to be sufficiently heated to bond, which would be at least its molten temperature of 212 °C.

B) In discussing whether extruding a blend of nylon and polyolefins at about 250 °C is taught by the applied references, the declaration of Albert E. Ortega under 37 CFR 1.132 filed 6 November 2009 refers only to the system described in the above referenced application and not to the individual claims of the application. Thus, there is no showing that the objective evidence of nonobviousness is commensurate in scope with the claims. See MPEP § 716.

C) Since the Declaration does not contain an indication of an event, act, or occurrence that has actually taken place, the Declaration, in general, is accorded opinion evidence status as it is, at best, a statement expressing what the person making it thinks, believes, or infers with regard to certain facts. Appropriate weight is given to the opinion evidence. However, no factual evidence has been made of record Gillespie's process would not provide the claimed static levels. The absence of factual support for the opinion makes it difficult to accord the opinion significant weight in overcoming the rejection. To determine the properties, "[T]he Patent Office is not equipped to manufacture products by the myriad of processes put before it and then

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obtain prior art products and make physical comparisons therewith.” *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972). Thus, although the opinion evidence is more substantial than arguments of counsel, opinion evidence cannot take the place of factually supported objective evidence (see MPEP § 2145).

C) Moreover, as recited above:

Gillespie in view of Tortora would necessarily teach the claimed result of having a static level measured at about one half inch below the outlet of the slot attenuation device of -2 to 2 kilovolt per inch as claimed principally because Gillespie teaches each of the claimed process steps.

D) Gillespie is relied upon for teaching to incorporate into the polymer melt components to control electrical properties (forming in an extruder) (see col. 5, lines 35-42). Thus, discussions of Warburton’s aqueous dispersion and water removal (see Warburton, col. 1, lines 44-56 and col. 8, lines 19-31), George’s water delivery system (see George, col. 7, line 45 through col. 8, line 10) and motivation in Warburton and George to add static control material to a melt blend are moot. Warburton is relied upon for teach teaches using a copolymer that contains sodium salts (sodium salts) of dodecane-1-sulfonic acid (a C₁₀-C₁₈ alkane and sulfonic acid) (see col. 4, line 60 through col. 5, line 6) and vinyl sulfonic acid (see Warburton, col. 3, line 8) or George is relied upon to each using a copolymer that contains sodium salts (sodium salts) of dodecane-1-sulfonic acid (a C₁₀-C₁₈ alkane and sulfonic acid) or octadecane-1-sulfonic acid (a C₁₀-C₁₈ alkane and sulfonic acid) (see George, col. 4, line 65 through col. 5, line 9).

In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

Collier Declaration

The declaration of Dr. Billie Collier under 37 CFR 1.132 filed 6 November 2009 is insufficient to overcome the rejection of claims 1-5, 10, 11, 13-20, 25, 26, and 28-32 based upon the references applied as set forth in the last Office Action.

Indications of the declaration of Albert E. Ortega under 37 CFR 1.132 filed 6 November 2009 appear to be on the grounds that:

A) The description of spunbonding in *Understanding Textiles*, page 330, is not complete. A different version of the book provides an expanded description of the process.

The indications of the declaration are addressed as follows:

A) The declaration of Dr. Billie Collier under 37 CFR 1.132 filed 6 November 2009 provides a quotation of a different publication of *Understanding Textiles*. However, the content of the quotation of a different publication of *Understanding Textiles* does not conflict with Tortora's (*Understanding Textiles*, pages 38, 39, 153-157, 330, 401, and 402) teaching of bonding conditions as relied upon above:

Tortora teaches spunbonding done by bonding the filaments while they partially molten (see Tortora, *Understanding Textiles*, page 330, first paragraph).

In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

Response to Arguments

Applicant's arguments filed 06 November 2009 have been fully considered but they are not persuasive.

Applicant argues with respect to the 35 USC 102(b) rejections. Applicant's arguments appear to be on the grounds that:

1) The newly amended limitation that the antistatic agent is present in an amount sufficient such that static level measured at about one half inch below the outlet of the slot attenuation device of -2 to 2 kilovolt per inch is not met by Gillespie since Gillespie does not disclose adding an antistatic agent.

2) The declaration of Albert E. Ortega under 37 CFR 1.132 filed 6 November 2009 details the interaction of Gillespie's triboelectric charge, which would increase the static level during processing.

3) As amended, the claims require bonding at 180-250 °C, which is not disclosed by Gillespie.

Applicant argues with respect to the 35 USC 103(a) rejections. Applicant's arguments appear to be on the grounds that:

4) A large amount of carbon black is required to see an appreciable anti-static effect. With such an amount, the carbon black would severely plug filters and packs, with would discourage its use.

5) The newly amended limitation that the antistatic agent is present in an amount sufficient such that static level measured at about one half inch below the outlet of the slot attenuation device of -2 to 2 kilovolt per inch is not met by Gillespie since Gillespie does not disclose adding an antistatic agent.

6) The declaration of Albert E. Ortega under 37 CFR 1.132 filed 6 November 2009 details that it would have not been obvious to one of ordinary skill in the art at the time the invention was made to use Warburton's or George's compositions in the process of Gillespie.

7) Since Warburton's materials all require methacrylic acid, since one commercially produced methacrylic acid has a flash point of 73 °C, and since spunbonding often occur above 200 °C, there would have been no reason to expect success in combining Warburton's methacrylic acid processes with Gillespie's spunbonding process due to the safety hazard.

The Applicant's arguments are addressed as follows:

1, 3, and 5) Applicant's arguments with respect to the newly claimed limitations have been considered but are moot in view of the new ground(s) of rejection.

1 and 5) Gillespie teaches using an antistatic agent as recited above:

- Gillespie teaches using combinations including nylon and polyester (see Gillespie, col. 4, lines 66 - col. 5, line 25).
- Gillespie does teach to incorporate into the polymer melt components to control electrical properties (forming in an extruder) (see col. 5, lines 35-42).

2, 5, and 6) The indications of the declaration of Albert E. Ortega under 37 CFR 1.132 filed 6 November 2009 are addressed above in Ortega Declaration section.

3) As recited above, Gillespie and Tortora teach bonding at 180-250 °C:

Gillespie teaches that the filaments are bonded by calendaring and hot through-air methods (see col. 7, lines 29-37), which would either heat the

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filaments to the point of melting or collect the filaments at the point of melting, respectively. Moreover, spunbonding is necessarily done by bonding the filaments while they partially molten (see Tortora, *Understanding Textiles*, page 330, first paragraph), and Gillespie's nylon 6 and polypropylene (see col. 8, lines 45-53) are molten above 212 and 163 °C (see Tortora, *Understanding Textiles*, page 38 and 39, Table 2.1).

If not otherwise expressed by Gillespie in view of Tortora to bond the fibers thermally within the claimed range (e.g., between 180 and about 250 °C), in this regard, Gillespie teaches that the filaments are bonded by calendaring and hot through-air methods (see col. 7, lines 29-37), which would either heat the filaments to the point of melting or collect the filaments at the point of melting, respectively, and Tortora teaches spunbonding done by bonding the filaments while they partially molten (see Tortora, *Understanding Textiles*, page 330, first paragraph). As such, Gillespie in view of Tortora recognizes that the bonding temperature is a result-effective variable. Since bonding temperature is a result-effective variable, one of ordinary skill in the art would have obviously been motivated to determine the optimum bonding temperature applied in the process of Gillespie in view of Tortora through routine experimentation based upon allowing the nylon 6 to be sufficiently heated to bond, which would be at least its molten temperature of 212 °C.

4) As recited on Page 17 of the Office Action mailed 26 February 2009:

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- Blending carbon is feasible principally because Tortora's teaching does provide for forming bi-component fibers (see page 401, forth paragraph, through page 402, line 2).
- In response to the indication that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., carpet yarn formation and 25% carbon black) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).
- Moreover, it is noted that Tortora's teaching of bicomponent fibers containing metal, which is an antistatic agent (see page 401, forth paragraph, through page 402, line 2) is not disputed.

7) Warburton is relied upon for teaching appropriate handling of methacrylic acid at temperatures above 73 °C since Warburton teaches processing at 200 °C (see col. 7, lines 19-26).

7) As recited on page 18 of the Office Action mailed 26 February 2009, the blend would display blended properties and be processed at a temperature within their individual points rather than retaining set points of melting etc.:

Moreover, Gillespie teaches that a blend of the polymers' melt temperatures is used (see col. 8, lines 45-53), which would obviate processing at temperatures of 50 and 160 °C.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Butler whose telephone number is (571) 272-8517. The examiner can normally be reached on Mon.-Thu. 7:30 a.m.-5 p.m. and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/P. B./

Examiner, Art Unit 1791

/Christina Johnson/

Supervisory Patent Examiner, Art Unit 1791